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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,282

09/07/2004

Yui-Shin Fran

12810-US-PA

5281

31561

7590

01/11/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

MACCHIAROLO, PETER J


ART UNIT

PAPER NUMBER

2879

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/711,282	Applicant(s) FRAN ET AL. 
	Examiner Peter J. Macchiarolo	Art Unit 2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino et al (USPN 6800010; "Hibino").**

Regarding claims 1 and 5, Hibino shows in figure 1, a cavity structure, comprising: a cavity shell (15, 11); a plurality of spacers (18), disposed in the cavity shell, a hardening paste (glass frit Bd), disposed between the cavity shell and the spacers; at least an electrode set (16), disposed on the cavity shell; a fluorescent substance (19), disposed on an inner wall of the cavity shell; and a discharge gas (disposed in the cavity shell).

Hibino is silent to a tolerance of a height of the spacers is larger than about 0.01 mm, or the tolerance of the height of the spacers is in a range of about 1/20 to about 1/4 of the height of the spacers.

However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

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*In re Aller*, 105 USPQ 233. One would be motivated to construct Hinotani's spacers with a tolerance of about 0.01 mm, or in a range of about 1/20 to about 1/4 of the height of the spacers to reduce the time and money involved in manufacturing the device, since it is well-known that having larger tolerances allow for reduced manufacturing cost.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Hinotani's spacers with a tolerance of about 0.01 mm, or in a range of about 1/20 to about 1/4 of the height of the spacers.

The Examiner notes that the preamble recites that the cavity structure is used for a CCFFL. This is an intended use type preamble, since it merely recites the intended use of a cavity. Where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone, the preamble is generally not accorded any patentable weight. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Regarding claims 2-4, Hibino is silent to the exact height of the spacers and thickness of the hardening paste.

However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Further, one would be motivated to construct Hibino's spacers and hardening paste to the recited dimensions for a variety of reasons, including material availability, and operation methods requiring sensitive parameters. Further evidence that these limitations would have been obvious can be found in paragraph [0014] of Applicant's instant specification.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Hibino's spacers and hardening paste to the recited dimensions.

Regarding claim 6, Hibino shows in figure 1, the cavity shell comprises a first substrate (15), a second substrate (11) disposed over the first substrate; and a frame (not shown) disposed between the first substrate and the second substrate and connected to an edge of the first substrate and an edge of the second substrate.

Regarding claim 7, Hibino teaches the air pressure inside the cavity shell is less than an air pressure outside the cavity shell.

**Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shichao et al (USPN 5565742; "Shichao").**

Regarding claim 8, Shichao shows in figure 8b a cavity structure, comprising: a cavity shell (FFP and BFP); a plurality of spacers (SB), disposed in the cavity shell, a hardening paste (BMM), disposed between the cavity shell and the spacers.

Shichao is silent to a tolerance of a height of the spacers is larger than about 0.01 mm, or the tolerance of the height of the spacers is in a range of about 1/20 to about 1/4 of the height of the spacers.

However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

*In re Aller*, 105 USPQ 233. One would be motivated to construct Shichao's spacers with a tolerance of about 0.01 mm, or in a range of about 1/20 to about 1/4 of the height of the spacers to reduce the time and money involved in manufacturing the device, since it is well-known that having larger tolerances allow for reduced manufacturing cost.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Shichao's spacers with a tolerance of about 0.01 mm, or in a range of about 1/20 to about 1/4 of the height of the spacers.

Regarding claims 9-11, Shichao is silent to the exact height of the spacers and thickness of the hardening paste.

However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

*In re Aller*, 105 USPQ 233. Further, one would be motivated to construct Shichao's spacers and hardening paste to the recited dimensions for a variety of reasons, including material availability, and operation methods requiring sensitive parameters. Further evidence that these limitations would have been obvious can be found in paragraph [0014] of Applicant's instant specification.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Shichao's spacers and hardening paste to the recited dimensions.

Regarding claim 12, Shichao teaches in column 25, lines 41-43 that the hardening paste (black matrix) comprises glass paste.

Regarding claim 13, Shichao teaches in the abstract, an air pressure inside the cavity shell is less than an air pressure outside the cavity shell.

***Conclusion***


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pjm

  
**JOSEPH WILLIAMS**  
**PRIMARY EXAMINER**